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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,724	03/19/2004	David R. Duncan	MONS:126US	2723

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EXAMINER	
ROBINSON, KEITH O NEAL	
ART UNIT	PAPER NUMBER
1638	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/708,724	DUNCAN ET AL.	
	Examiner	Art Unit	
	KEITH O. ROBINSON	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) *9-15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Applicant's withdrawal of claims 9-15, filed October 7, 2008, have been received and entered in full.

2. Claims 1-8, 16 and 17 are under examination.

Claim Rejections - 35 USC § 103

3. Claims 1-8, 16 and 17 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al (US Patent No. 6,140,555, October 31, 2000), in view of Saxena et al (US Patent No. 5,477,000, December 19, 1995). The rejection has been repeated for the reasons of record as set forth on pages 2-7 of the Office Action mailed July 8, 2008. Applicant's arguments, filed October 7, 2008, have been fully considered but are not persuasive.

Applicant argues there is no description of an explant comprising a nodal section in the Reichert et al reference and that the Saxena et al reference does not cure this deficiency because Saxena et al does not relate to use of a nodal section explant (see page 7, paragraph # 1 of 'Remarks' filed October 7, 2008).

This is not persuasive. Reichert et al teach methods for obtaining transformable callus tissue (see, for example, column 2, line 59 to column 3, line 5 where it teaches that immature zygotic embryos can be used as explants for callus cultures and Table 1 where it lists several references that teach methods for obtaining transformable callus tissue) and isolating nodal section from corn seedling (see, for example, column 3, line

60 to column 5, line 3 where it teaches “[s]eedling nodal tissues from inbred B73 were excised from...seedlings"). Thus, the Reichert et al reference does teach explants comprising a nodal section.

Applicant argues that the Reichert et al reference relates to induction of somatic embryogenesis from immature zygotic embryos or the use of nodal tissues to initiate organogenic callus cultures and does not discuss initiation of embryogenic callus from nodal sections; in addition, Applicant argues that the organogenic tissue cited in the Reichert et al reference is induced on media that do not comprise cytokinin (see page 7, paragraph # 2 to page 8, lines 1-5 of ‘Remarks’ filed October 7, 2008).

This is not persuasive. Reichert et al does teach using seedling nodal tissues as explants (see, for example, column 3, line 60 to column 5, lines 1-3; also see, for example, column 2, line 59 to column 3, line 5 and Table 1 where it teaches “[r]egeneration was a result of scutellar tissue proliferation which lead to the formation of embryogenic callus from which mature bipolar somatic embryos emerged and subsequently, regenerated into whole plantlets").

MPEP 2141 (III) teaches, “[p]rior art is not limited just to the references being applied, but includes the understanding of one of ordinary skill in the art. The prior art reference (or references when combined) need not teach or suggest all the claim limitations…[and]… [t]he mere existence of differences between the prior art and an invention does not establish the invention’s nonobviousness.” Dann v. Johnston, 425 U.S. 219, 230, 189 USPQ 257, 261 (1976). The gap between the prior art and the claimed invention may not be “so great as to render the [claim] nonobvious to one

reasonably skilled in the art."Id. In determining obviousness, neither the particular motivation to make the claimed invention nor the problem the inventor is solving controls. The proper analysis is whether the claimed invention would have been obvious to one of ordinary skill in the art after consideration of all the facts". Thus, one of ordinary skill in the art would have understood that initiation of embryogenic callus would have been produced from nodal sections.

Reichert et al does teach media containing a cytokinin (see, for example, column 5, lines 64-67 where it teaches the cytokinin BAP). In addition, Saxena et al teach tissue culture media containing an effective amount of auxin and an effective amount of cytokinin (see, for example, the 'Abstract' where it teaches, "viable regenerants can be produced by culturing an intact plant seed…in the presence of cytokinin and/or auxin growth factors". Also see, for example, column 7, lines 30-35, where it teaches, "growth regulators used in the medium may be one or more components selected from any one group or components mixed and selected from two or more of the above listed groups [wherein the above listed groups lists examples of cytokinins and auxins (see column 7, lines 7-29)]). Finally, see, for example, column 7, lines 65-66 where it teaches, "[t]he use…of an auxin and TDZ [a cytokinin] are effective as well.").

Applicant argues that the Reichert et al reference does not teach a medium containing a cytokinin and an auxin and no step of embryogenic callus induction is described (see page 8, paragraph # 3, 1st paragraph of 'Remarks' filed October 7, 2008).

This is not persuasive. Reichert et al teach that immature zygotic embryos can be used as explants for callus cultures (see, for example, column 2, line 59 to column 3, line 5; also see Table 1 where it lists several references that teach methods for obtaining transformable callus tissue). In addition, Reichert et al teach culturing nodal sections on induction media to produce embryogenic callus suitable for transformation (see, for example column 10, line 65 to column 11, line 15, where it teaches "[n]odal section explants are placed on corn shoot induction medium"; column 10, lines 45-47 where it states, “explants are also used as targets in a biolistics-based transformation system”). In addition, Saxena et al teach media containing an effective amount of auxin and an effective amount of cytokinin (see, for example, the ‘Abstract’ where it teaches, “viable regenerants can be produced by culturing an intact plant seed…in the presence of cytokinin and/or auxin growth factors”).

Applicant argues that immediately following the quoted limitation of “capable of producing callus…”, each of present claims 1, 16 and 17 explicitly recite that embryonic callus is produced from a nodal section, according to the claimed method and thus, the rejection should be withdrawn (see page 8, last paragraph to page 9, lines 1-3 of 'Remarks' filed October 7, 2008).

This is not persuasive. The Examiner maintains the rejection for the reasons of record as set forth on page 4 of the Office Action mailed July 8, 2008.

Applicant argues that the Reichert et al reference is mischaracterized in that it explicitly discusses use of immature zygotic embryos, rather than nodal explants to produce callus and that portions of the Reichert et al reference that discuss use of nodal

explants do not effect formation of callus, instead utilizing an organogenic approach to produce shoots (see page 9, 1st paragraph of 'Remarks' filed October 7, 2008).

This is not persuasive. Reichert et al does teach using seedling nodal tissues as explants (see, for example, column 3, line 60 to column 5, lines 1-3; also see, for example, column 2, line 59 to column 3, line 5 and Table 1 where it teaches "[r]egeneration was a result of scutellar tissue proliferation which lead to the formation of embryogenic callus from which mature bipolar somatic embryos emerged and subsequently, regenerated into whole plantlets").

Applicant argues that the Reichert et al reference does not state that the tissues being used in the cited media were nodal explants, but instead they are described as somatic embryos and adventitious shoots from shoot tips or germinated immature zygotic embryos (see page 9, last paragraph of 'Remarks' filed October 7, 2008).

This is not persuasive. Reichert et al teach that immature zygotic embryos can be used as explants for callus cultures (see, for example, column 2, line 59 to column 3, line 5) and culturing nodal sections on induction media to produce embryogenic callus suitable for transformation (see, for example column 10, line 65 to column 11, line 15, where it teaches "[n]odal section explants are placed on corn shoot induction medium"; column 10, lines 45-47 where it states, "explants are also used as targets in a biolistics-based transformation system").

In addition, Saxena et al teach germination of mature seed in tissue culture media containing an effective amount of auxin and an effective amount of cytokinin (see, for example, the 'Abstract' where it teaches, "viable regenerants can be produced

by culturing an intact plant seed…in the presence of cytokinin and/or auxin growth factors". Also see, for example, column 7, lines 30-35, where it teaches, "growth regulators used in the medium may be one or more components selected from any one group or components mixed and selected from two or more of the above listed groups [wherein the above listed groups lists examples of cytokinins and auxins (see column 7, lines 7-29)]). Finally, see, for example, column 7, lines 65-66 where it teaches, "[t]he use…of an auxin and TDZ [a cytokinin] are effective as well.").

Thus, based on the combined teaches of Reichert et al and Saxena et al, it would have been obvious to one of ordinary skill in the art that nodal explants can be used in the cited media.

Applicant's arguments regarding the Zhong et al reference are not being addressed by the Examiner because the reference was not used in the pending rejection.

Conclusion

4. No claims are allowed.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH O. ROBINSON whose telephone number is (571)272-2918. The examiner can normally be reached Monday – Friday, 7:30 a.m. - 4:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Keith O. Robinson
/David H Kruse/
Primary Examiner, Art Unit 1638
29 January 2009